Urban Development for Healthier Cities: A Cross-cutting Approach to Innovative Local Governance

Barcelona (ES), 13-14 June 2016

City Panel: Innovation, leadership and participatory governance for health and wellbeing – Three cities, three models

Ing. SANDRO PETRUZZI

Metropolitan City of Torino
• What is a Metropolitan City (or Area)

• Why Metropolitan Cities play a key role for the sustainable development:
  • In the world, in Europe, in Italy

• The Metropolitan City of Turin
  • Presentation
  • Strategic plan
  • Some good practices (I hope!!!)
A Metropolitan Area (or City) is a region consisting of a densely populated urban core and its less-populated surrounding territories, sharing industries, infrastructures, and public services.

Metropolitan areas include one or more urban areas, as well as satellite cities, towns and rural areas that are socio-economically tied to the urban core.
Host the 54% of the world population
Take up the 3% of the earth surface
Consume 80% of the resources

Produce 80% of GDP

Produce 85% of innovation

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Europe is one of the most urbanised continents in the world.

The policies of European Metropolitan areas will determine the future economic, social and territorial development of the European Union because Metropolitan Cities play a key role:

- as engines of the economy
- as places of connectivity, creativity and innovation
- and as centres of services for their surrounding areas.
Metropolitan cities are, however, also places where problems such as unemployment, segregation and poverty are concentrated.

Thriving and dynamic metropolitan cities can play an important role in the well-being not only of their own inhabitants but also for the surrounding rural populations.
In other words…. Metropolitan Cities are both the problem and the solution.
The Metropolitan Cities in Italy are a system composed of over a thousand municipalities, that together constitute the “backbone” of the national economy.

Since the January 2015 In Italy there are 10 Metropolitan Cities which account for 11% of the surface area of the territory but have over 30% of the population.

They produce more than a third of national value added and contain 20.3% of the railway stations and a third of the airports.
In Italy, the Metropolitan Cities are fully aware of the role that they are assuming in the promotion of a sustainable local development.

The most important instrument is the Metropolitan Strategic Plan which will be adopted by each Metropolitan City in this 2016.

The Metropolitan Strategic Plan will outline the policies for the “promotion and coordination of economic and social development, also insuring support for economic activities and innovative research, consistently with the vocation of the city”.
It replaced the Province of Turin and it is composed by Torino City and other 314 Municipalities. It is officially operative starting from the 1 first of January 2015.
MAIN DATA

- Municipalities: 315
- Km²: 6,830
- Inhabitants: 2,248,955
- Mountainous areas: 52.4%
- Hilly areas: 20.9%
- Valley areas: 26.7%
- Main economic sectors: industry, ICT, business services, tourism, agriculture.
GOVERNANCE

**Metropolitan Major**
- Is the major of the City of Turin elected by its Citizens;

**Metropolitan Council**
- Is composed by 18 members elected by Majors and councilors of the 315 municipalities
- Their members are councilors or majors (2° level election)

**Metropolitan Conference**
- Is composed by 315 majors of the municipalities
When you think of Turin, for most people the thought goes immediately to FIAT and its working class, the industrial identity that for over a century marked the city skyline.

And it is certainly an image that comes from the history of a city that for over one hundred years has been the most important Italian factory town, symbol of work, that become strong and great thanks to the industry.

The industrial area of Mirafiori where more than 55,000 workers were employed in 1970
After the end of the Second World War, the city of Turin actively participated in the "Italian economic miracle", and its population sharply increased, reaching 1.2 million inhabitants in 1974.

The main protagonists of this development were Fiat and other automotive companies, which attracted workers from every part of the country in particular from the South.

For decades the “City of the Fiat” was seen in Italy as nothing more than a "grey industrial city".
But in the last 20 years Turin had known the crisis of the automotive and, slowly, had lost many industrial activities and reduced significantly the number of workers.

Starting from its industrial roots Torino has been able to invest in new vocations.

Turin is becoming the city of the opportunities with a large number of institutions of excellence in research and technological innovation as well as incubators enterprise that enabled it to be one of the three Italian cities with the highest number of start-ups.

Polytechnic of Turin’s Mobility Campus (Cittadella della Mobilità). Hosts the degree courses of Industrial Design and Visual Communication and Automotive Engineering.
The Strategic Plan of the Metropolitan city of Turin (PSMTo) contains an agenda of multisectorial actions, within which is possible to identify the priorities and strategic projects, selected according to the criteria of relevance, feasibility and sustainability.

One of the first challenges that will face PSMTo regards the dichotomy between urban metropolitan area and rural and mountain areas, taking advantage of the specificity of each and recognizing the differences between territories.

The construction of a metropolitan governance must be based on the overcoming of the administrative borders to build a strong network of cooperation, capable of giving birth to a truly cohesive territory, attractor of investment, economic, social opportunities, cultural, scientific, tourist, and competitive with the rest of the country and the world.
In a fragmented context such as that of Turin one of the most challenging issue was to convince all the 315 municipalities of the advantages of being inside the CMTTo compared to the disadvantages to stay outside.

Everyone must feel included; each reality, big or small it is, closer or further away from the Capital City, is a fundamental part of the Metropolitan City of Turin.

The involvement of a territory as vast and diverse as ours needs to establish a new participatory model of local administrators.

The CMTTo has articulated its territory into 11 homogeneous areas in order to modulate its own vision of development, taking into account the different identities and priorities sharing this fundamental principles:

- Access to resources and services must be guaranteed equally to all citizens and areas.
- Specificity and diversity are values to defend;
- Each Area will have to recognize their own identity and assume a definite role to collaborate with other parts of the territory;
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Sestriere – the highest municipality in Italy 2050 m

Gran Paradiso national park

The historic center of Turin with the surrounding landscape and the Po river

A small rural village

The orange battle during the historical carnival of Ivrea
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Between 1990 - 2006 has been used more than 75 million of square meters of ground (approximately 7500 soccer field), meanwhile has been realized buildings that together represent a City of the same extension of Turin. Moreover the speed of construction was in this period three time higher than the previous:

- **1990 - 2000** used on average **265 ha per year**
- **2000 - 2006** used on average **803 ha per year**
CLASSIFICATION OF THE AREAS IN THE TERRITORIAL COORDINATION PLAN

**Dense Areas**
Transformation and increasing processes are allowed in respect of applicable standards.

**Transition Areas**
Through higher-ranking tools, it is possible to reach the completion of urban rules oriented to the respect of quality.

**Free Areas**
These areas are absolutely to protect in order to limit the dispersion urban process and consequently the soil consumption.

A territorial plan covers regulations on land usage, the development of large urban areas, and the planning of infrastructure such as road network and railways.
SUSTAINABLE USE OF NATURAL RESOURCES

Consolidated Urban Areas:
their territory is almost compromised by the evolution of the buildings

Transition areas:
completion processes or connection between urban and suburbs

Free areas:
mainly natural or agricultural areas
### SUSTAINABLE USE OF NATURAL RESOURCES

<table>
<thead>
<tr>
<th></th>
<th>HOMES</th>
<th>PRODUCTIVE ACTIVITIES</th>
<th>COMMERCIAL ACTIVITIES</th>
<th>PUBLIC INTEREST ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOCALIZATION PROCESS</strong></td>
<td>growth opportunities, through densification, replacement buildings, urban restructuring</td>
<td>recovery of unused or underused areas, growth opportunities, through densification, replacement buildings, urban restructuring</td>
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<td>For the localization of public interest activities are preferable the dense areas, environmentally compatible</td>
</tr>
<tr>
<td><strong>DENSE AREAS</strong></td>
<td>limited growth opportunities through urban planning and restoration, to be develop in sectors fixing sprawl damages</td>
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<tr>
<td><strong>FREE AREAS</strong></td>
<td>not available for new buildings</td>
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<td>Usable for public interest buildings only in lack of other possibilities, in this case approximately the 5% of the investment will be addressed to compensation environmental measures</td>
</tr>
</tbody>
</table>
Torino aims to become a smart city, in which the quality of life improves with the ability to promote a clean and sustainable mobility, reducing the energy consumption, producing high technology, offering culture, be accessible.

These are the objectives that the city is given within the Torino Smart City Project.
Turin was selected as runners-up, winning the second prize, for its open innovation models supporting social innovation start-ups and creating new market opportunities for urban innovations.

European Capital of Innovation Award Capital 2016

INNOVATION UNION
ENVIRONMENTAL SUSTAINABILITY and RENEWABLE ENERGYs, in collaboration with other Italian and European cities.

PRIORITY AREAS FOR IMPLEMENTATION:

- public and private building
- energy efficiency
- renewable energies
- mobility and transport
- good practices

TAPE
Turin Action Plan for Energy

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TAPE – ACTION PLAN

ACTION PLAN COMPOSED OF 51 ACTIONS

THE MOST SIGNIFICANT ACTIONS:

DISTRICT HEATING
CO2 REDUCTION ESTIMATES AT 2020: 567.679 t/year

URBAN SUSTAINABLE MOBILITY PLAN (PUMS)
CO2 REDUCTION ESTIMATES AT 2020: 261.679 t/year

ENERGY RENOVATION OF BUILDINGS
REDUCTION ESTIMATES AT 2020: 259.476 t/year

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THE 2° STEP   TAPE ➤ SMILE

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SMILE  Smart Mobility Inclusion Life&Health and Energy

THE KEY COMPONENTS

4 VERTICAL DOMAINS where the city expresses a clear value

Priority & Objectives + System of KPIs

Interconnection and interaction

Mobility  Inclusion  Life & Health  Energy

1 CONNECTIVE TISSUE of transparent and minimally invasive technologies

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SMILE - PARTICIPATION IN NUMBERS

350 PEOPLE INVOLVED

\{ 28 Companies \\
23 Entities \\
5 Research Centers \\
10 Associations \}

5 THEMATIC WORKGROUPS

150 working days

10 THOUSAND MAN HOURS SPENT

THE CITY OF TURIN REPRESENSENTED IN SMILE

77 people involved

- 55 participated in the work groups
- 22 attended the committees (guidance & operating)

All Departments participated

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HOW TO FACE NEW SOCIAL CHALLENGES?

SMILE
#15 TORINO SOCIAL INNOVATION

Cities have an enormous potential as innovation collectors because of the strong concentration of competences, high-educated people, resources, networks.

Almost 100,000 university students of around 900,000 inhabitants

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SMILE
#15 TORINO SOCIAL INNOVATION

FIRST RESULTS

From January 2014:

170 projects submitted

35 projects in incubation phase

22 projects funded

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ENERGY SAVINGS AT SCHOOL

Description: retrofitting of school buildings to achieve a reduction in the energy consumption.

- 41,000 sqm AREA
- 70-80% ENERGY SAVING
- 1000 t/year of CO2 EMISSION REDUCTION
The school building structure, the environment where students study, The space, the classrooms, the laboratories, the lobbies, **the building shape**, the wall **colors**, the **illumination quality**, the furniture, the context where the school building is, all above create the environment where the student learns, **live**, get experiences, **be in relationship**.
The ongoing research project Green School

Metropolitan City of Turin

Politecnico di Torino
Research team TEBE | www.polito/tebe/

Developing an innovative approach to the sustainable management of the portfolio of buildings of the metropolitan city of Turin, which facilitates the transformation of existing school buildings in sustainable school facilities.
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## ASSESS: Whole school sustainability framework

<table>
<thead>
<tr>
<th>Environmental performance</th>
<th>Social performance</th>
<th>Economic performance</th>
<th>Functional and technical requirements</th>
<th>Process quality</th>
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</thead>
<tbody>
<tr>
<td>• Mobility</td>
<td>• Accessibility</td>
<td>• Building-related</td>
<td>• Space efficiency</td>
<td>• Monitoring/metering of building performance</td>
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<tr>
<td>• Site sustainability</td>
<td>• Adaptability</td>
<td>facility management costs, cleaning, maintenance;</td>
<td>• Technical quality of building envelope</td>
<td>• Sustainable procurements</td>
</tr>
<tr>
<td>• Operational energy usage</td>
<td>• Health and comfort</td>
<td>• Building-related insurance costs;</td>
<td></td>
<td>• Policy</td>
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<tr>
<td>• Water energy usage</td>
<td>• Maintenance</td>
<td>• Energy and water related costs;</td>
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<tr>
<td>• Operational waste management</td>
<td>• Safety and security</td>
<td>• Taxes, subsidies and incentives;</td>
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<td></td>
<td></td>
<td>• Other economic aspects</td>
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Sustainable school as an opportunity

“High-performing schools result in high-performing students, and green schools go far beyond bricks and mortar.

We see an opportunity to educate a new generation of leaders – sustainability natives – capable of driving global market transformation.”
The Metropolitan city territory joins a mix of natural landscape, ancient traditions, historical and cultural heritage but also a huge variety of agricultural and food products.

For this reason was born the brand "Prodotti del Paniere" that means “Basket of typical products”, a trademark that protects and guarantees the typical food of the area.
On the basis of technical-scientific testing this products:

- are produced using only **traditional methods** by local manufacturers;
- are part of the local, historic tradition;
- are produced using **local ingredients**;
- Represent an opportunity of development for the territory.
The network, in connection with other national and international network, now includes:

- 32 products, in addition to the DOC wines;
- 900 local producers;
- 30 shops and 60 restaurants participating in the promotion.
Torino hosts every Year: “Terra Madre Salone del Gusto”

This year 5,000 delegates from 160 countries, over 800 exhibitors, 300 Slow Food Presidia and 500 Terra Madre food communities will take part in the most important international event dedicated to food culture.
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Thank you for your attention.